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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,251	06/25/2003	Michael E. DeRosa	SP02-142	4975
22928	7590	03/06/2006		
CORNING INCORPORATED SP-TI-3-1 CORNING, NY 14831			EXAMINER VANOY, TIMOTHY C	
			ART UNIT 1754	PAPER NUMBER
DATE MAILED: 03/06/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/607,251

**Applicant(s)**

DEROSA ET AL.

**Examiner**

Timothy C. Vanoy

**Art Unit**

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-75 is/are pending in the application.
- 4a) Of the above claim(s) 42 and 44-75 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 and 43 is/are rejected.
- 7) ☒ Claim(s) 35-75 is/are objected to.
- 8) ☒ Claim(s) 1-75 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/30/2004</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of renumbered claims 1-41 and 43 in the reply filed on Feb. 23, 2006 is acknowledged.

*The traversal is on the ground(s) that the different groups of inventions are intertwined and closely related such that the examination and search for one group of inventions necessitates the search and examination of the other groups of inventions.*

This is not found persuasive because the search and examination of one group of inventions does not necessitate the examination and search for the other groups of inventions. The fields of search for the different inventions are divergent and do not overlap. The examination of the extra inventions poses the undue burdens of having to formulate the extra rejections and/or objections for the extra invention and poses the undue burdens of having to consider and/or rebut the applicants' arguments for the extra inventions. Examining the extra inventions poses an undue burden on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Renumbered claims 42 and 44-75 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on Feb. 23, 2006.

### ***Claim Objections***

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a) The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 37-77 have been renumbered as claims 35-75, respectively for the purposes of examination, but these claims must be officially renumbered via amendment. **The applicants are required to submit an amendment, which officially renumbers the misnumbered claims with their response to this Office action because the examiner can not edit the claim numbers in the eDAN data system for this application.**

b) In renumbered claim 38, there is no literal antecedent basis in claim 18 for the "said calcination step" in as much as claim 18 does not literally refer to a "calcination step".

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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- a) In claim 12, it appears that the applicants are claiming two different temperature ranges within the same claim, which is improper. One temperature range is the "wide range of temperatures" while the other temperature range is the "from about  $-40^{\circ}\text{C}$  up to about  $1200^{\circ}\text{C}$ ". The use of a narrower numerical range that falls within a broader range within the same claim renders the claim indefinite: please see section 2173.05(c)(I) in the MPEP 8<sup>th</sup> Ed., Rev. 3, Aug. 2005.
- b) In claim 13, it is unclear whether or not the lower temperature limit is  $0^{\circ}\text{C}$  or is  $20^{\circ}\text{C}$ .

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-41 and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent 6,468,941 B1 to Bortun et al.

Col. 1 lines 25-32 in U. S. Patent 6,468,941 B1 discloses that the oxygen storage ability of  $\text{CeO}_2$  arises from the facile nature of the  $\text{Ce}^{4+}/\text{Ce}^{3+}$  redox reaction. The oxidation of  $\text{Ce}_2\text{O}_3$  to  $\text{CeO}_2$  builds up oxygen reserve. *The disclosure set forth in col. 1 lines 25-32 in U. S. Patent 6,468,941 B1 fairly suggests that  $\text{Ce}_2\text{O}_3$  can react with and*

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*remove oxygen out of an atmosphere.* Col. 2 lines 10-17 in U. S. Patent 6,468,941 B1 discloses that in Ce-Zr based solid solutions the bulk Ce is redox active, and these materials are referred to OIC/OS type materials because their function involves oxygen storage. Col. 3 lines 19-30 reports that the oxygen storage material comprises: up to 95 mole % zirconium; about 0.5 to 40 mole % cerium; about 0.5 to 15 mole % R, where R is a rare earth metal, an alkaline earth metal or a combination of these two and from 0.5 to 15 mole % niobium. The oxygen storage material may also include a precious metal component: please see col. 3 lines 43-44.

Example 1 in col.s 6 and 7 reports what appears to be the same method for preparing the oxygen storage material, comprising:

preparing a solution of nitrate salts of the oxygen storage metallic components;  
adding the solution of an aqueous solution of ammonium hydroxide to precipitate out a mixed hydrous oxide;  
filtering out the precipitate and washing it with a liquid, and  
calcining the precipitate to produce the mixed oxide, oxygen storage material.

The following references are made of record:

U. S. Patent 6,605,264 B2 disclosing a niobium containing zirconium-cerium based solid solution, and

U. S. Patent 6,286,516 B1 disclosing an oxygen storage material that is based on oxides of cerium (please see col. 7 lines 33-44).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Timothy C Vanoy*  
Timothy C Vanoy  
Patent Examiner  
Art Unit 1754

tv